

LISTING OF CLAIMS:

Claims 1-8 (Cancelled)

9. (Currently Amended) The machine of ~~claim 8-claim 12~~, further comprising inspecting means for inspecting parts in the carrier tape, wherein said vibrating means is positioned adjacent the compartment being inspected by said inspecting means such that said vibrating means may be actuated in response to a part being rejected by said inspecting means, wherein said inspecting means may re-inspect the part after said vibrating means vibrates the tape.

10. (Cancelled)

11. (Cancelled)

12. (Currently Amended) The machine of claim 11, A part processing machine for depositing parts in compartments of a carrier tape, the machine comprising:
support means for supporting the carrier tape;
advancing means for advancing the carrier tape through the machine;
pick-and-place means for depositing the parts in the compartments of the carrier tape; and
vibrating means for vibrating the carrier tape to cause the parts to settle into the compartments;
wherein said vibrating means includes a motor having a rotating output shaft and an eccentric weight on said output shaft for rotation therewith, wherein rotation of said output shaft and eccentric weight cause said motor to vibrate;
wherein said vibrating means further includes a vibration transferring member mounted to said motor and intermittently contacting the carrier tape at least during rotation of said output shaft and eccentric weight, the vibration transferring member transferring vibration of said motor to the carrier tape to settle the parts into the compartments; and
wherein said vibration transferring member includes a flexible strip of metal mounted to said support means and supporting said motor in cantilever fashion.

13. (Currently Amended) The machine of ~~claim 8~~claim 12, wherein the carrier tape includes at least one flange, wherein the compartments depend downwardly with respect to the flange, wherein said support means supports the carrier tape by the flange, and wherein said vibrating means is mounted to the support means below the at least one flange and is operable to transfer vibration to the compartments.

14. (Currently Amended) The machine of ~~claim 8~~claim 12, wherein said ~~vibrating means includes motor is~~ an electric motor ~~generating vibrations~~, the machine further comprising a voltage regulating means for permitting the adjustment of voltage provided to said motor such that the level of vibrations generated by said motor may be adjusted by adjusting the supplied voltage.

15. (Currently Amended) The machine of ~~claim 8~~claim 12, ~~wherein said vibrating means includes an electric motor generating vibrations, the machine further comprising a resilient mounting structure supporting said motor and an adjustable damping means for varying the resiliency of said resilient mounting structure~~ flexible strip of metal and for thereby adjusting the level of vibrations produced by said motor.

16. (Cancelled)

17. (Currently Amended) The method of ~~claim 16~~claim 21, wherein the act of loading includes placing the part into one of the plurality of compartments with a pick-and-place vacuum head.

18. (Cancelled)

19. (Cancelled)

20. (Currently Amended) The method of ~~claim 19~~claim 21, wherein the motor is an electric motor, and wherein the act of activating a vibrator further includes adjusting the voltage of electricity supplied to the motor to adjust the level of vibrations generated by the motor.

21. (Currently Amended) ~~The method of claim 19,~~ A method for packaging parts in a carrier tape, the carrier tape being advanceable by a taper apparatus and including a plurality of compartments, the method comprising:

loading a part into one of the plurality of compartments;
activating a vibrator module to produce a vibration; and
transferring the vibration to the carrier tape to settle the part within the compartment;
wherein the act of activating a vibrator module includes rotating an eccentric weight to produce the vibration;

wherein the act of activating a vibrator module further includes activating a motor to rotate an output shaft to which the eccentric weight is mounted such that the motor vibrates during operation; and

wherein the act of transferring includes mounting a flexible member to the taper apparatus, supporting the motor with the flexible member in a cantilever fashion, and intermittently contacting the carrier tape with the flexible member during operation of the motor.

22. (Cancelled)

23. (Currently Amended) The method of ~~claim 22~~claim 21, wherein the act of transferring further includes selectively damping the resiliency of the ~~resilient mounting structure~~ flexible member to adjust the level of vibrations being transferred to the tape.

24. (New) A method for inspecting parts in carrier tape having pockets, the method comprising:

performing a first inspection of a first part in a first pocket of the carrier tape;
vibrating the carrier tape if the first part is rejected in the first inspection step;
repositioning the first part in the first pocket in response to the vibrating step;
performing a second inspection of the first part after the vibrating step to determine whether the first part was falsely rejected in the first inspection step; and
inspecting a second part in a second pocket of the carrier tape.

25. (New) The method of claim 24, further comprising:

positioning the first part in the first pocket;
moving the first pocket carrying the first part into an inspection station; and
performing the first inspection step while the first pocket is in the inspection station.

26. (New) The method of claim 25, wherein the vibrating, repositioning, and second inspection steps are also performed in the inspection station.

27. (New) The method of claim 24, wherein the vibrating step includes energizing a vibration module to generate vibrations, and transferring vibrations from the vibration module to the carrier tape.

28. (New) The method of claim 27, wherein the vibration module includes an electric motor having a rotatable output shaft and an eccentric weight on the output shaft, and wherein the energizing step includes providing power to the motor and rotating the output shaft and eccentric weight.

29. (New) The method of claim 27, wherein transferring vibrations includes supporting the vibration module with a flexible member, positioning a portion of the flexible member proximate the carrier tape, vibrating the flexible member in response to the vibrations generated by the vibration module, and intermittently contacting the carrier tape with the flexible member in response to vibration of the flexible member.

30. (New) The method of claim 24, wherein the first pocket includes a relatively flat bottom, and wherein the repositioning step includes moving the first part from a non-parallel orientation with respect to the relatively flat bottom of the pocket to a generally parallel orientation with respect to the relatively flat bottom.

31. (New) The method of claim 24, wherein the first pocket includes a relatively flat bottom and generally upright sidewalls, and wherein the repositioning step includes moving the first part from an orientation in which the first part is supported by the relatively flat bottom and touches at least one of the sidewalls to an orientation in which the first part is supported by the relatively flat bottom and touches none of the sidewalls.

32. (New) The method of claim 24, wherein the first pocket includes a relatively flat bottom and generally upright sidewalls, and wherein the repositioning step includes moving the first part from an orientation in which the first part is tilted with respect to the relatively flat bottom and is at least partially supported by at least one of the sidewalls to an orientation in which the first part is supported only by the relatively flat bottom.

33. (New) A method for inspecting parts in carrier tape having pockets, the method comprising:

performing a first inspection of a first part in a first pocket of the carrier tape;

vibrating the carrier tape;

moving the first part in the first pocket in response to the vibrating step;

performing a second inspection of the first part after the vibrating step; and

inspecting a second part in a second pocket of the carrier tape.

34. (New) The method of claim 33, further comprising:

positioning the first part in the first pocket before performing a first inspection;

moving the first pocket carrying the first part into an inspection station; and

performing the first inspection step while the first pocket is in the inspection station.

35. (New) The method of claim 34, wherein the vibrating, moving, and second inspection steps are also performed in the inspection station.

36. (New) The method of claim 33, wherein the vibrating step includes energizing a vibration module to generate vibrations, and transferring vibrations from the vibration module to the carrier tape.

37. (New) The method of claim 36, wherein transferring vibrations includes supporting the vibration module with a flexible member, positioning a portion of the flexible member proximate the carrier tape, vibrating the flexible member in response to the vibrations generated by the vibration module, and intermittently contacting the carrier tape with the flexible member in response to vibration of the flexible member.

38. (New) A method for inspecting parts in carrier tape having pockets, the method comprising:

positioning a part in a pocket of the carrier tape;

performing a first vibration of the carrier tape after positioning the part in the pocket of the carrier tape;

inspecting the part in the pocket of the carrier tape after the first vibration;

performing a second vibration of the carrier tape after inspecting the part in the pocket of the carrier tape; and

reinspecting the part in the pocket after performing the second vibration.

39. (New) The method of claim 38, wherein positioning a part includes positioning a part in a pocket of the carrier tape in a positioning station, and wherein the first vibration step is also performed in the positioning station.

40. (New) The method of claim 38, wherein inspecting the part includes inspecting the part in an inspection station, and wherein the second vibration step is also performed in the inspection station.

41. (New) The method of claim 40, wherein inspecting and reinspecting are both performed with a single means for inspecting and the second vibration step is performed with a means for vibrating, and wherein the means for inspecting and the means for vibrating are positioned such that inspecting, second vibrating, and reinspecting are all performed in the inspection station and the carrier tape does not advance between the inspecting, second vibrating, and reinspecting steps.